Photo: P. FitzMaurice

COMMUNITIES AND DIAMONDS

Photo: L. Leong

Socio-economic Impacts in the Communities of Behchokǫ̀, Detah, Gamèti, Łutselk'e, Ndılo, Wekweètì, Whatì and Yellowknife

2010 Annual Report

of the Government of the Northwest Territories

Under the BHP Billiton, Diavik and De Beers

Socio-economic Agreements

Northwest Territories

Prepared by:
Health and Social Services
Education, Culture and Employment
Justice
Finance
Industry, Tourism and Investment
NWT Bureau of Statistics
NWT Housing Corporation

May 2012

If you would like this information in another official language, call us.

Si vous voulez ces informations en français, contactez-nous.

Kīspin ki nitawihtīn ē nīhīyawihk ōma ācimōwin, tipwāsinān.

UVANITTUAQ ILITCHURISUKUPKU INUVIALUKTUN, QUQUAQLUTA.

ʔERIHTŁ'ÍS DËNE SÚŁINÉ YATI T'A HUTS'ELKËR XA BEYÁYATI THEʔĄ ʔAT'E, NUWE TS'ËN YÓŁTI.

EDI GONDI DEHGÁH GOT'ĮE ZHATIÉ K'ÉÉ EDATŁ'ÉH ENAHDDHĘ NIDE.

K'ÁHSHÓ GOT'ĮNE XƏDǾ K'É HEDERI ʔEDĮHTL'É YERINIWĘ NÍDÉ DÚLE.

JII GEENJIT GWICH'IN ZHIT GAVISHINDAI' NIINDHAN JI'. NIKHWETS'ĄT GINÒHKHII.

TŁĮCHǪ YATI K'ÈÈ. DI WEGODI NEWǪ DÈ, GOTS'O GONEDE.

ᑕᕐᓂᐊ ᑎᑎᕐᒃᑲᐃᑦ ᐱᓕᒪᔪᐱᑦ ᐃᓄᖅᑎᑐᕐᕕᒪᓗᑎᒃ, ᐅᓪᓚᑎᓐᓄᑦ ᐅᖃᓕᓕᒫᓂᑦ

Hapkua titiqqat pijumagupkit Inuinnaqtun, uvaptinnut hivajarlutit.

To request a translation, please call the Department of Industry, Tourism and Investment at (867) 920-8935.

Table of Contents

Part 1. Introduction 3
Background Information 3
Purpose of this Report 3
Parts of this Report 3
Communities this Report Tracks 4
Choice of Indicators 5
Data Sources 6
How Indicators Are Reviewed 7

Part 2. Possible Effects of Mine Activity 9

Part 3. Findings 10
Health and Families 10
Crime 20
Housing 23
Cultural Well-Being and Traditional Economy 26
Wages 29
Jobs 31
Education 33
Business 35
Net Effect on Government 36
Sustainable Development 38

Part 4. Words to Know (Glossary) 39

Appendix A – Company Predictions on Mine Activity

Appendix B – Industrial, Social and Political Events

Appendix C – data tables ..... see CD on back cover of report

Part 1. Introduction

Background Information

This report is prepared because of a commitment made by the Government of the Northwest Territories (GNWT) in the socio-economic agreements that it has with mining companies in the Northwest Territories (NWT). At this time there are socio-economic agreements for three operating mines. These are the BHP[1] Ekati Mine, the Diavik Diamond Mine, and the De Beers Snap Lake Mine.

Socio-economic agreements are follow-up programs to environmental assessments. In an environmental assessment, a developer must predict what effect its mine may have on the people and communities of the NWT. Appendix A shows the effects that each developer predicted. Under the socio-economic agreements, we monitor the effects of the mines to see how accurate those predictions were. Each socio-economic agreement also follows up on the steps each developer said it would take to manage and avoid negative effects.

Purpose of this Report

The main task of this report is to see if and how mine activity may be affecting the NWT and its communities. The report looks at about 22 socio-economic areas to see how much each changed between 1996 and 2010. Changes in 13 socio-economic areas seem to be influenced by the mines.

Parts of this Report

This report has six parts:

Part 1 of this main report has introductory and background material that helps to understand the rest of the report.

Part 2 is a chart that lists the changes that seem related to mine development in the NWT. These changes may be due to the mines alone or due to the mines combined with other events.

Part 3 describes what has happened in the NWT since work began at the first mine in late 1996. It does this for each of the socio-economic areas looked at in this report. Part 3 also talks about possible reasons for the changes.

Part 4 describes some of the terms used in this report in more detail.

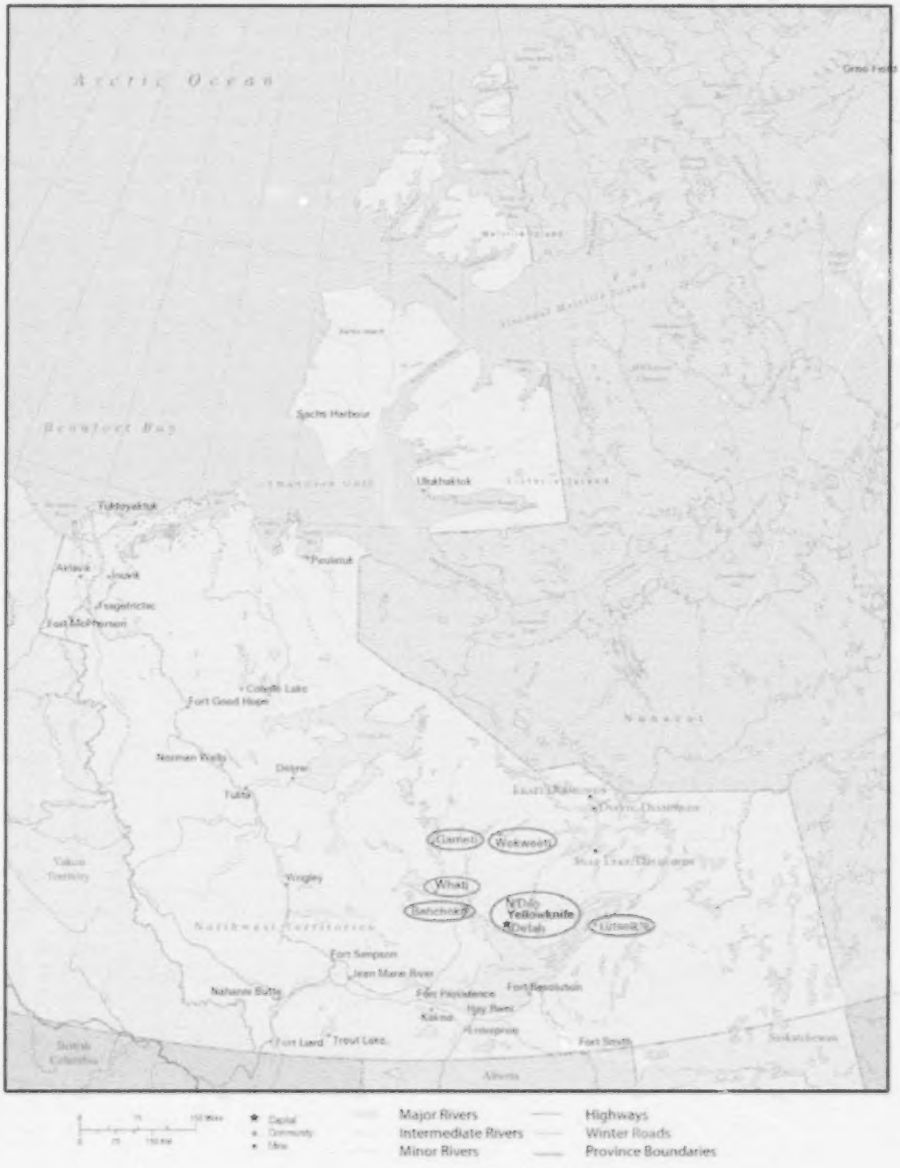
Appendix A shows the predictions each developer made before its mine was approved. It shows what the developer thought might happen to the NWT and its communities.

Appendix B lists key events that have happened in the NWT since 1997. Knowing what other events were taking place in this time helps us to understand what events (other than the mines) may have caused changes in the socio-economic areas we look at.

Appendix C has data tables and is on the CD attached to this report. It includes data for all indicators shown in Part 3 of this report and some additional data. It also includes the population data that was used to compute each rate in the report.

Communities this Report Tracks

Figure 1: A map of the Northwest Territories showing the Local Study Area communities tracked in this report.



This report looks at the city of Yellowknife and at seven smaller NWT communities.

The seven small communities are Behchokǫ̀, Dettah, Gamètì, Łutselk'e, Ndilo, Wekweètì, and Whatì.

When the small communities are grouped, they are called the Small Local Communities (SLCs).

When the Small Local Communities and Yellowknife are grouped, they are called the Local Study Area (LSA).

Choice of Indicators

An indicator are data that we can use to measure change. For example, the developers predicted that mining can lead to more violence, and we want to know if this is happening. The "Police-Reported Violent Crimes" indicator can be used for this.

A set of indicators was developed after public consultation that relate to the possible effects we may see from mining. That set of indicators was negotiated into the socio-economic agreements. There have been some changes over time but the basic list of indicators applies broadly to all mine development. The list includes a mix of objective and subjective indicators. [ii]

The GNWT looks at sustainable economic development through the lens of a five-point framework. The five groups are:

1. community, family and individual well-being
2. cultural well-being and traditional economy
3. non-traditional economy
4. net effect on government
5. sustainable development.

The table below and on the next page lists the indicators required under the socio-economic agreements with mines in the NWT.

BHP	Diavik	De Beers
Community, Family & Individual Well-Being		
number of potential years of life lost	n/a	n/a
number of injuries	age standardized injuries	age standardized injuries
number of suicides		
number of communicable diseases	communicable diseases (sexually-transmitted infections[iii], tuberculosis)	communicable diseases (sexually-transmitted infections, tuberculosis)
number of teen births		
	single-parent families (also referred to as lone-parent families)	lone-parent families
number of children receiving services.[iv]	children in care[iv]	children in care[iv]
number of complaints of family violence	number of women and children referred to shelters	number of women and children referred to shelters
number of alcohol- and drug-related crimes	police-reported crimes, according to the following categories: violent, property, drug-related, other	police-reported crimes, according to the following categories: violent, property, drug-related, other
number of property crimes		
housing indicators	n/a	n/a

BHP	Diavik	De Beers
Cultural Well-Being & Traditional Economy		
	ratio of home language use to mother tongue, by major age groups	ratio of home language use to mother tongue, by major age groups
	percentage of workforce-aged group engaged in traditional activities	per cent of workforce-aged group engaged in traditional activities
Non-Traditional Economy		
average income of residents	average income	average income
	proportion of high income earners	proportion of high income earners
number of social assistance cases[v]	social assistance cases[v]	income support cases[v]
employment levels and participation	employment	employment
	participation rate	employment participation rate
high school completion	number of people 15 years and older with less than Grade 9	number of people 15 years and older with less than Grade 9
	number of people 15 years and older with a high school diploma	number of people 15 years and older with a high school diploma
	registered businesses, bankruptcies and start-ups	registered businesses, bankruptcies and start-ups
Net Effect on Government		
	net effects on government of the project	
Sustainable Development		
	secondary industry data and initiatives	

Data Sources

Data used for the indicators has come from a few sources. Government departments and agencies collect some types of data. For example the RCMP, nurses and doctors all collect data as part of their jobs. Government regularly collects other data as well, such as information about high school graduation.

The rest of the data comes from surveys. The NWT Bureau of Statistics does a Community Survey every five years. These surveys try to record data in the areas of most concern for people in the NWT. As well, Statistics Canada does a census across Canada every five years. The last one was in 2006 and the next one in May 2011. Other surveys like the 2005 Community Impact Survey are also done at times.

Both Ndilo and the North Slave Métis Alliance are communities under the socio-economic agreements. However, data are not always available for these groups. Appendix C includes any data that are available.

The data source for each indicator is shown below each graph in Part 3 and below each table in Appendix C. Appendix C includes all data used in this report and some extra data.

How Indicators Are Reviewed

This Section of the report describes the steps we take to analyse trends. It explains:

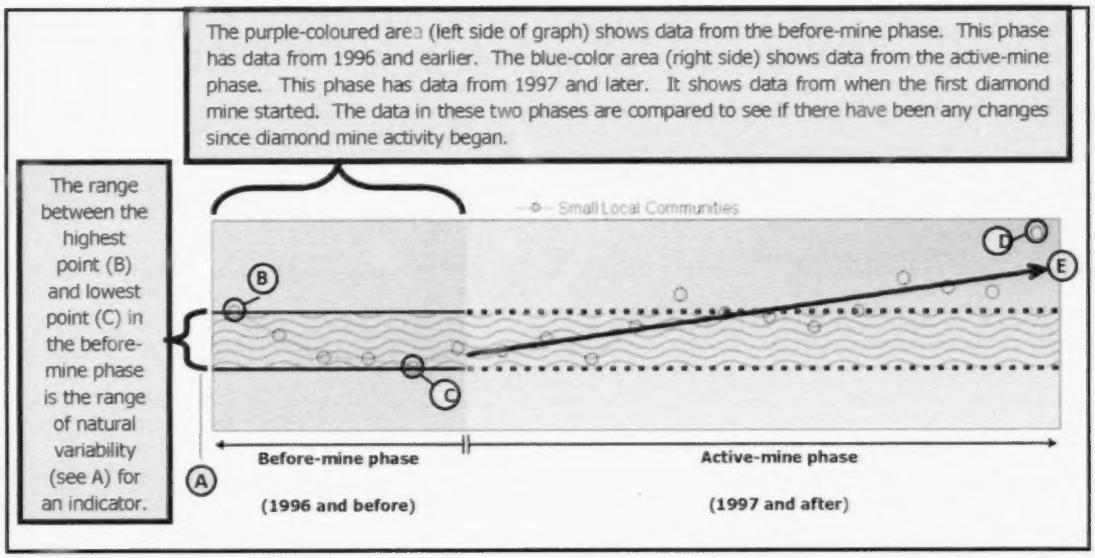
1. how data are graphed;
2. how we see if a change has occurred that is something other than a normal change;
3. how we analyse whether the mines or other events may have led to that change.

Step 1

An indicator's data are graphed for as many years as data can be found. Data have been adjusted to account for the creation of Nunavut.

Mine work started in early 1997, so any data from 1996 and before is from the "before-mine phase." These data are shown on the left, purple-shaded side of each graph (see Figure 2 below). Any data from 1997 or later is from the "active-mine phase" and is shown on the right, blue-shaded side of each graph.

Figure 2: A picture showing how an indicator's data are graphed and looked at in this report.


The purple-coloured area (left side of graph) shows data from the before-mine phase. This phase has data from 1996 and earlier. The blue-color area (right side) shows data from the active-mine phase. This phase has data from 1997 and later. It shows data from when the first diamond mine started. The data in these two phases are compared to see if there have been any changes since diamond mine activity began.
The range between the highest point (B) and lowest point (C) in the before-mine phase is the range of natural variability (see A) for an indicator.
Small Local Communities
B
C
D
E
A
Before-mine phase
(1996 and before)
Active-mine phase
(1997 and after)

Step 2

The space between the highest and lowest data points in the before-mine phase is found (shown as A in Figure 2). It will form the shape of a long rectangle going across the whole graph. The top line of this rectangle shows the highest point that was ever seen in the before-mine phase for that indicator. The bottom line shows the lowest point that was ever seen in the before-mine phase. This is the indicator's 'range of natural variability'. In Figure 2, the 'range of natural variability' for the before-mine phase is shown carrying through into the active-mine phase as a broken line.

Indicator data often goes up or down. It can also follow a natural cycle. Looking at this natural range helps us see if there have been any unusual changes in the Local Study Area since the mines opened. It helps answer the question, 'are we seeing anything that we did not see before the first mine began in 1997'? If highs and lows in the data since 1997 are no higher or lower than before the mines started, then it is not likely the mines have influenced the data.

Step 3

Next, the overall change in the active-mine phase for each indicator is found. This is a general line drawn along the data points (arrow-line E in Figure 2). This is a trend line and shows the direction of changes, up or down. When there are no overall changes, this trend line will be flat. In the example above, the arrow trend line (E) is showing an upward change.

Step 4

If there is a trend in the data for the Small Local Communities or for Yellowknife, the next step is to ask if this is:

1. a new trend, or one we were already seeing before the mines;
2. a trend that we are also seeing in other parts of the NWT; or
3. similar to a trend being seen across Canada.

If we are seeing the same trend in Small Local Communities or Yellowknife that we are seeing in other places, then the mines are likely not influencing the data. Changes are more likely happening because society is changing.

Step 5

If the data are showing a trend that may be influenced by mining, GNWT departments look at different information to understand who or what may be causing the trend. This includes considering what other events could explain the changes being seen. For example, changes in the way data are collected can cause a trend line to go up or down. New government policies, programs or legislation could also influence a trend.

Appendix B is a table listing events that took place between 1997 and 2010 that might have influenced data for the Local Study Area. The table shows events for major:

- job shocks felt in the NWT;
- changes to government programs, services, policies or legislation; or,
- other social events.

Step 6

The analysis for each indicator is summarized and reported in Part 3.

Part 2. Possible Effects of Mine Activity

Sometimes the data and analysis indicate that mine activity is influencing what we see in the Local Study Area. The table below lists those indicators that the mines may be influencing. The changes they show may be due to the mines alone or to the mines in combination with other events.

Red arrows (↑/↓) show changes viewed as negative. Green arrows (↑/↓) show changes most people would see as positive. The chart only shows changes that may be influenced by mining.

INDICATOR SHOWING POSSIBLE EFFECTS	TYPE OF EFFECTS AND WHERE	
	SMALL LOCAL COMMUNITIES	YELLOWKNIFE
Community, Family & Individual Well-Being		
Injuries		↓
Sexually Transmitted Infections	↑	
Teen Births	↓	
Single-parent Families	↑	
Family Violence	↑	
Home Ownership		↓
Households in Core Need	↓	↑
Cultural Well-Being and Traditional Economy		
Hunting or Fishing	↑	
Eating Country Foods	↑	
Non-Traditional Economy		
Average Income	↑	↑
Wage Disparity	↓	
Income Assistance	↓	
Unemployment	↓	

Part 3. Findings

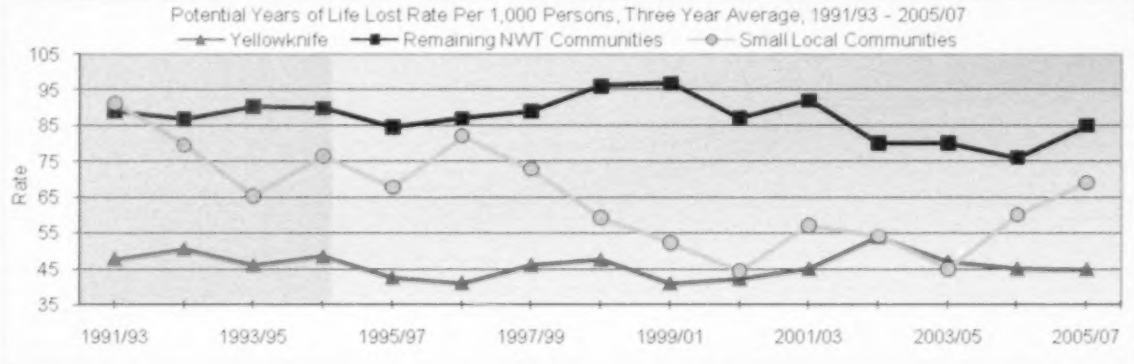
Health and Families

Potential Years of Life Lost (PYLL)

Potential Years of Life Lost (PYLL) shows early deaths[vi]. PYLL helps show the health, well-being, and lifestyle choices that people are choosing.

There can be large changes in PYLL rates from one year to the next. To offset this so that we can see the trends more clearly, PYLL is shown as a three-year average.

Trend Predicted by Developer			
BHP Ekati	↑	De Beers Snap Lake	↓
Diavik	↑		



Source: Statistics Canada Vital Statistics.

What we are seeing

Small Local Communities – Before the mines began, the PYLL rate was going down sharply. PYLL has gone down since the mines began, which is the trend that we were already seeing. At this time mining does not seem to have had an effect.

Yellowknife – The PYLL rate has been both higher and lower than in the pre-mine period. It seems to follow a natural cycle that is unrelated to the mines.

Possible reasons for change

The down moving rate in the Small Local Communities could be due to better standards of living or better access to health services.

Injuries

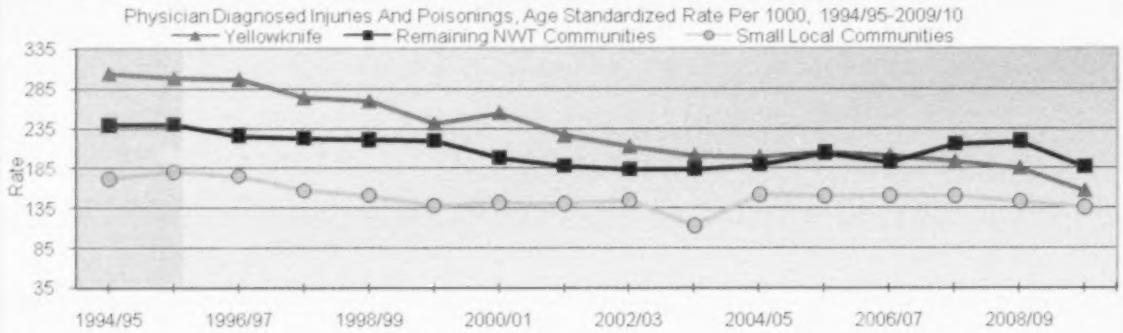
This indicator measures the number of people who have been said by a doctor or nurse to have been injured. Injuries include broken bones and severe burns. They also include cuts or bruises and poisonings. One person can have more than one injury per year. [vii]

Keeping track of injuries tells us if more reckless actions or violence are taking place. These changes can happen when a society goes through lots of changes quickly.

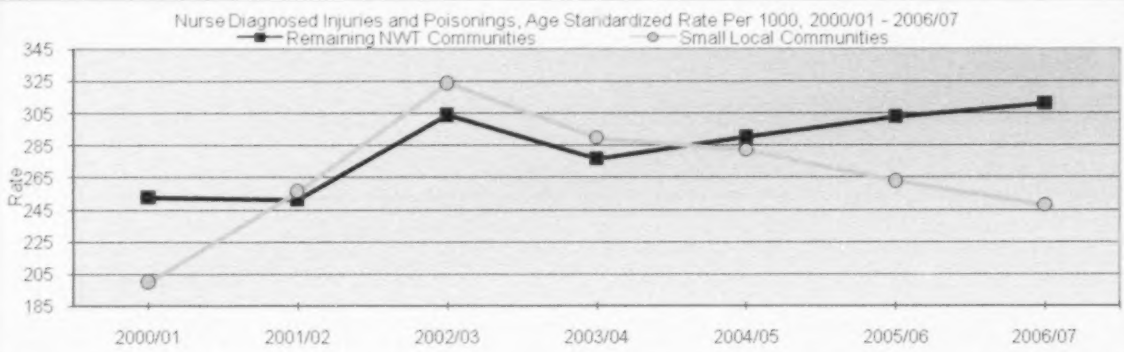
This report shows age-standardized injuries. This lets us look at groups made up of people of different ages and compare those groups over time. For instance, one community may have more young people than another. Young people tend to have more injuries than older people. [viii]

Nurses diagnose most injuries in communities other than Yellowknife. The way nurses record injuries changed in 2000. Due to this change, data reported by nurses cannot be compared between the before-mine and active-mine phases.

Trend Predicted by Developer			
BHP Ekati	↑	De Beers Snap Lake	↓
Diavik	↑		



Source: Department of Health and Social Services, *Medicare*.



Source: Department of Health and Social Services, *Health Suite*

What we are seeing

Small Local Communities – The rate of injuries has not really changed since 1999/2000. However, most people who are injured in small communities are seen by nurses. As there are no data from before 1996 to compare, we cannot say whether mining has influenced the rate of injuries.

Yellowknife – In the active-mine phase, the trend has been going down. It was going down slightly before the mines began and has gone down faster since 1996.

Possible reasons for change

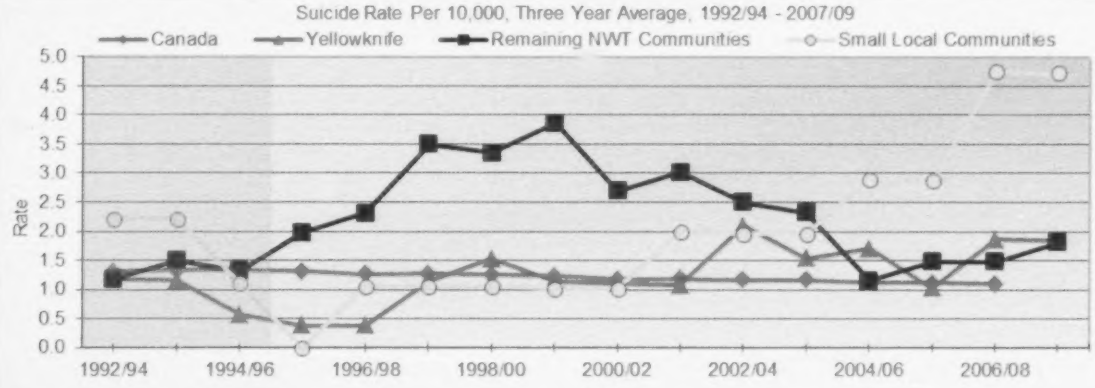
The lower rate for injuries in Yellowknife may be due to the success of injury and poison prevention efforts. These efforts include the mine safety programs.

Suicides

Suicide is often linked to social issues. It can also be linked to mental health problems. These include depression, divorce or separation, and drug abuse. The data below show actual deaths and does not show people who try to commit suicide.

Three-year averages are used, to smooth out the year-to-year changes seen with small numbers. Readers should still view the trend lines with caution. In some areas there may be only two or three suicides in a given three-year phase. This makes it hard to judge these data and any trends they may show.

Trend Predicted by Developer			
BHP Ekati	---	De Beers Snap Lake	↑
Diavik	---		



Source: Statistics Canada Vital Statistics (1992 - 2007); NWT Coroner's Report and CANSIM Table 102-0552 (2008, 2009)

What we are seeing

Small Local Communities – The rate of suicides had been going down in the pre-mine period. The overall trend since 1995/1997 has been rising. In 2004/06 the rate of suicide in Small Local Communities became higher than it had been in the pre-mine phase. Since 2003/2005, it has been higher than in Yellowknife.

Yellowknife – For much of the time since 1996 the rate in Yellowknife has been no higher or lower than it was in the before-mine phase. However, it had been going down until 1996/98 and has tended to go up since then.

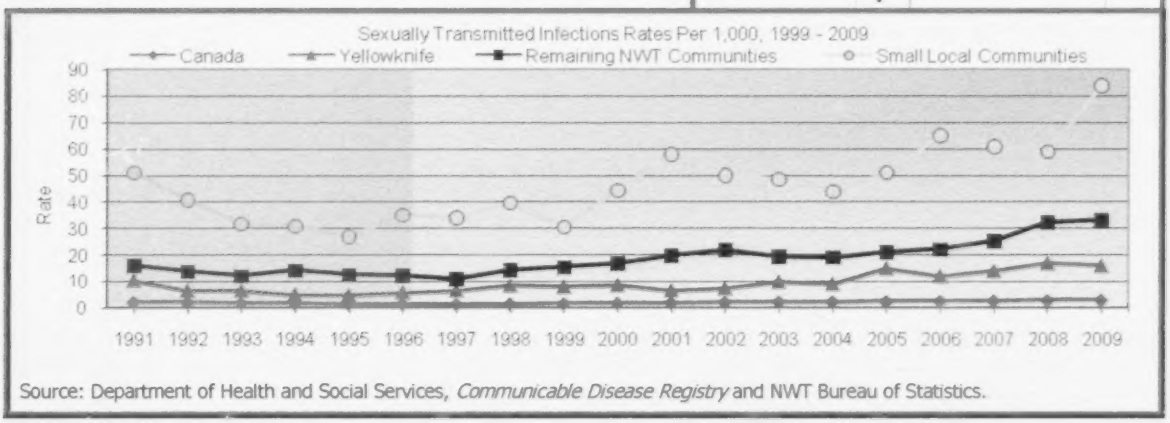
In other small and regional communities in the NWT, the rate has been going down since 1999/2001. The rate of suicides in Canada has also been has been going down. It is possible there is a link between mining and the rates in Small Local Communities and in Yellowknife. However, there are too little data to say this with certainty.

Sexually Transmitted Infections

Sexually transmitted infections (STIs) can affect the health and well-being of people. STIs can cause damage to the body and can stop people from having children. Risky sex and other acts can increase the chance of getting an STI. This report includes data on some of the most common STIs.[ix]

People who are infected with chlamydia and gonorrhea may go untreated because these STIs may not show any signs for a long time. It is for this reason that they can spread quickly in small areas. No jobs, low education levels, bad housing and isolation can also increase STI rates. Social factors such as violence and drug abuse also affect STI rates.

Trend Predicted by Developer			
BHP Ekati	---	De Beers Snap Lake	↑
Diavik	↑		



Source: Department of Health and Social Services, *Communicable Disease Registry* and NWT Bureau of Statistics.

What we are seeing

Small Local Communities – In the active-mine phase, the Small Local Communities trend has been going up. Since 2006, the rate has been higher than at any time in the before-mine phase. The rate is going up across the NWT. It is going up more quickly in the Small Local Communities. There is may be a link between mining and the rate of sexually-transmitted infections.

Yellowknife – Until 2005, the rate in Yellowknife was no higher or lower than it was in the before-mine phase. The rate has gone up (and gone up more quickly) in other parts of the NWT. It has also gone up in Canada. The Yellowknife rate is likely not influenced by the mines.

Possible reasons for change

In the middle of 2008 there was an outbreak of syphilis in the NWT. This STI was once nearly gone. There had been only four cases in the ten years before this outbreak.[x] There have been outbreaks in Alberta over the last few years that began in Calgary and Edmonton and then spread into northern Alberta.[xi] It is likely that the NWT outbreak came from Alberta.

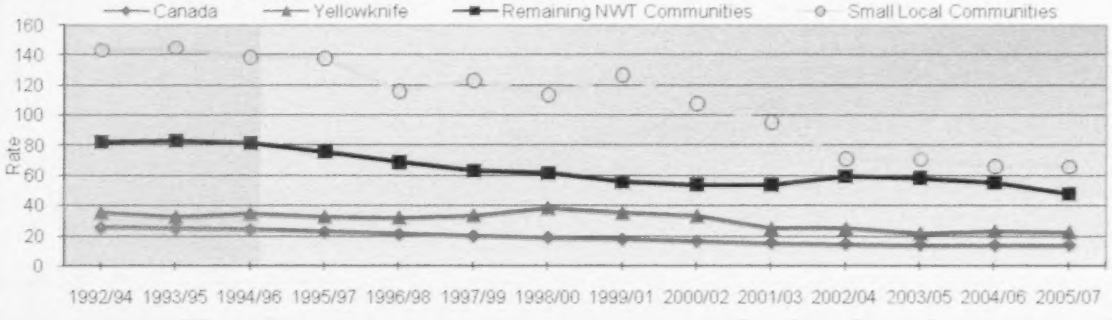
Mine employment has influenced who people from the Small Local Communities come into contact with. As well, the amount of free time for parents has changed due to new work schedules or mine jobs. This

may mean children are getting less care from their parents in certain ways. Youth are more affected by STIs compared to other age groups. Youth and young adults between the ages of 15 to 29 have the highest rates of STIs. Parents being away from home more because of new jobs may have led to an increase in STIs. Higher incomes from mine jobs have made it easier for people to abuse alcohol and drugs more. Greater abuse means people are more likely to do risky activities.

Teen Births

Some teen mothers may be mature enough for the demands of raising a child and others may not be. Stress and lack of maturity may affect the well-being of both the child and parents. Teen mothers are also more likely to be single.

Trend Predicted by Developer			
BHP Ekati	---	De Beers Snap Lake	↑
Diavik	---		



Source: Statistics Canada Vital Statistics.

What we are seeing

Small Local Communities – The rate of teenage births was steady in the before-mine phase. After that, it dropped quickly until 2002/2004. It went down more quickly than in the rest of the NWT or Canada. Mines may be part of the reason for this change.

Yellowknife – In the active-mine phase, the Yellowknife rate has also been going down. Except for a peak in 1998/1999, the drop in the Yellowknife rate has mirrored the drop in the Canadian rate. It is unlikely that the mines have influenced the rate of teen births in Yellowknife.

Possible reasons for change

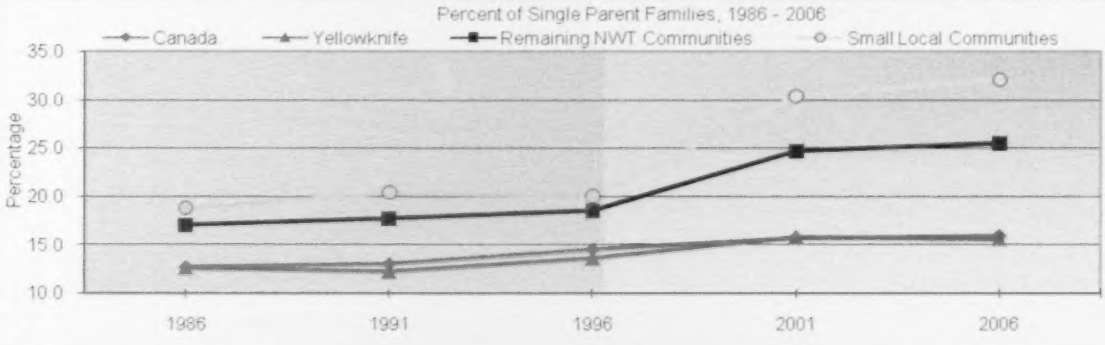
Dropping rates may be due to many reasons. More planned parenting and use of birth control could be reasons. More teens may be pursuing education. The chance for employment at a mine may mean women are more likely to get a job after their schooling now, rather than start their family as soon as they leave school.

Single-Parent Families

Single-parent families have a lot of stress compared to two-parent families. They can suffer from social problems and often have problems with money and finding jobs. They may also need more services and support compared to other families.

These families can also affect the NWT economy and its growth. This can happen when parents cannot work because they cannot find daycare.

Trend Predicted by Developer			
BHP Ekati	↑	De Beers Snap Lake	↑
Diavik	---		



Source: Statistics Canada Census.

What we are seeing

Small Local Communities – The rate of single-parent families had been steady before the mines. It went up quickly after 1996. It is still going up. The rate in other small and regional communities has also gone up but not as quickly. In the communities, people are also telling us that they see more divorces since the mines began. There is likely a link between this rate and mining activity.

Yellowknife – The Yellowknife trend has also been going up, but not as much. The rate is higher than in the before-mine phase. These changes are much like those seen across Canada. The mines do not seem to have influenced the Yellowknife rate.

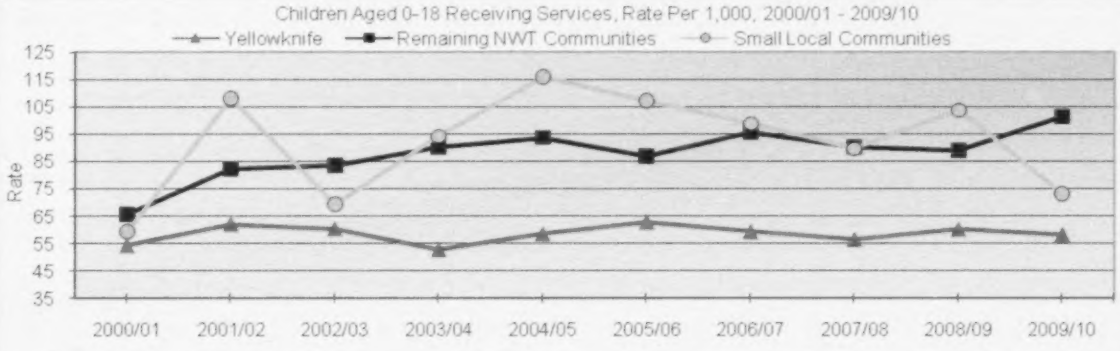
Possible reasons for change

Being away from home to work at a remote mine site can cause stress in a family. Having new chances for employment and being able to get emergency protection orders may give some people choices they did not have before.[xii]

Children Receiving Services

Child welfare policy was changed in the late 1990s. In 1998, the *Child and Family Services Act* created a new choice for children at risk. Now a child welfare worker can work with the child and family in their home. They can make a "plan of care" promise. The new *Act* lets parents get help for their children or family and not give up their parental rights. This means the before-mine and active-mine phases cannot be compared.

Trend Predicted by Developer			
BHP Ekati	↑	De Beers Snap Lake	---
Diavik	↑		



Source: Department of Health and Social Services, Administrative Records and *Child and Family Information System (CFIS)*

Possible reasons for change

Changes in the number of child welfare workers can affect the number of children getting help. Public and staff awareness can also affect reporting.

Small Local Communities are prone to seeing spikes in their rates. For example, if in a small community four or five children from one house are receiving services, this could cause the rate for that community to spike very high if there are not many people in that community. Five children in a small community can show as a big change.

Family Violence

A study by Statistics Canada shows many factors increase family violence. They include people being without work, social isolation, alcohol abuse, younger couples and common-law unions. Many of these factors are more common in the North.[xiii]

Family violence is a serious problem in the NWT. Research says that both men and women experience and commit family violence, although women tend to experience violence more often and more severely. Getting a good picture of actual levels of family violence in the NWT or Canada is not easy. This is because:

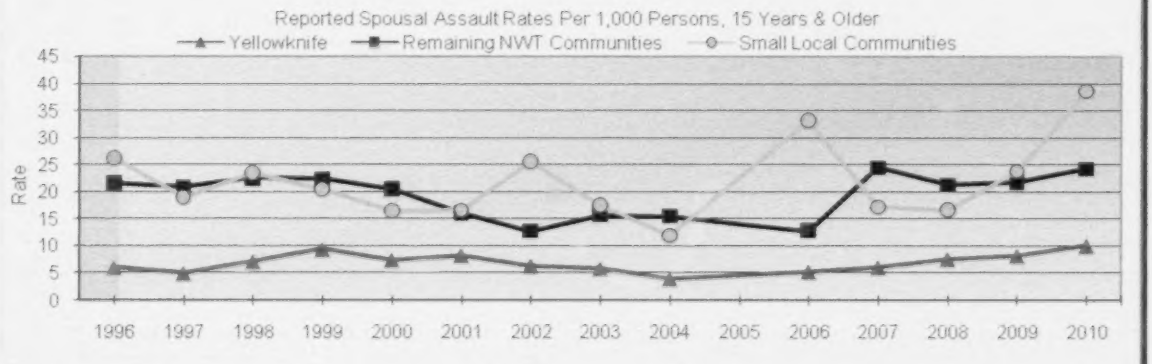
- Violent *Criminal Code* offences are reported as spousal assault only if the victim and offender are known to be spouses.
- Some victims do not report family violence out of fear or loyalty. Research tells us a woman may be abused many times before she reports it to the police.

Emergency shelters are places where victims of family violence can temporarily find refuge. Shelter data show how much a shelter in a community is used. The data do not show how many times any one person may have used a shelter. The data also do not tell us the home community of the women and children who use a shelter. Some communities do not have emergency shelters.

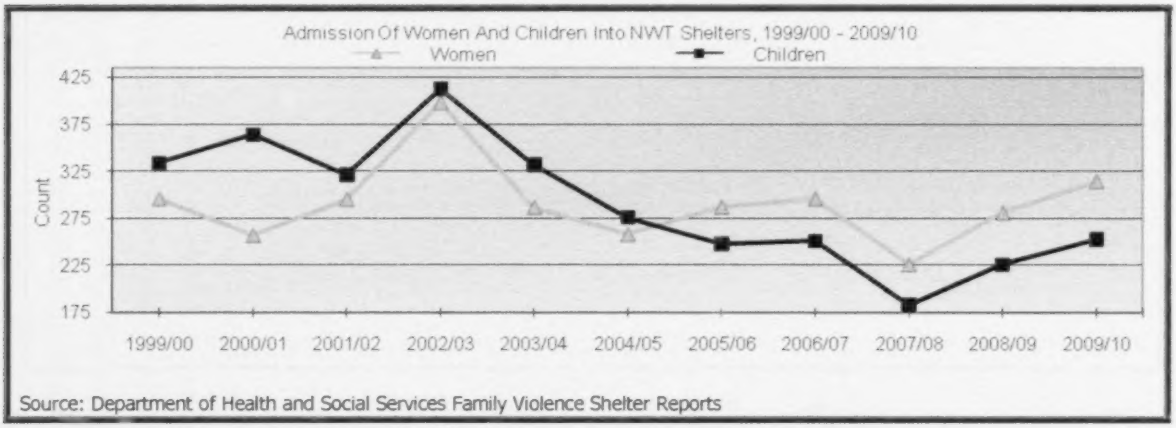
The indicators tracked in this report only show a partial picture. Police-reported spousal assaults, as well as data on shelter use and the number of applications for emergency protection orders, help give some measure of family violence in the NWT. Front-line workers suggest that many victims do not use shelters. They also suggest that victims do not believe the justice system can protect them.[xiv]

In order to see changes in family violence in this report, we look at data for both spousal assault and shelter use.

Trend Predicted by Developer			
BHP Ekati	↑	De Beers Snap Lake	↑
Diavik	↑		



Source: RCMP "G" Division



Source: Department of Health and Social Services Family Violence Shelter Reports

What we are seeing

Small Local Communities – When the mines first began, the rate of spousal assault was going down. Since then, it peaked in 2002, 2006 and 2010. In 2006 and 2010 the rate of reported spousal assaults was greater than in the before-mine period. Those rates were also higher than the rate for other small and regional communities in the NWT. Mine activity may or may not be a factor in the rate of reported spousal abuse in Small Local Communities.

Yellowknife – The trend seems to be flat with some peaks and valleys. This could be part of a natural pattern. There are no data for the period before 1996. At this time there is no reason to conclude that mining activity is influencing the rate of spousal assault in Yellowknife.

Shelter use has gone up since 2007/2008. Before-mine and active-mine phases cannot be compared. This is because there are only shelter data from 1999 and onward.

Possible reasons for change

An increase or decrease in the number of reports of family violence can be due to many things. An increase in reported cases could be due to more police in the Small Local Communities. Better social awareness and support for victims can also mean more victims will be more likely to report. Barriers may prevent victims from coming forward.

Changes in shelter use can also be due to many reasons. They include the status and reputation of a shelter and the kinds of services and programs the shelter provides.

Crime

The communities of Detah, Ndilo, Gamètì and Wekweètì do not have RCMP stations at this time. Gamètì is patrolled out of Behchokǫ̀. The others are patrolled out of Yellowknife. Some small communities do not have a detachment. In these communities criminal incidents are reported as if they occurred in the community with the detachment that provides policing services. For instance, Gamètì crimes would show as part of the Behchokǫ̀ data.

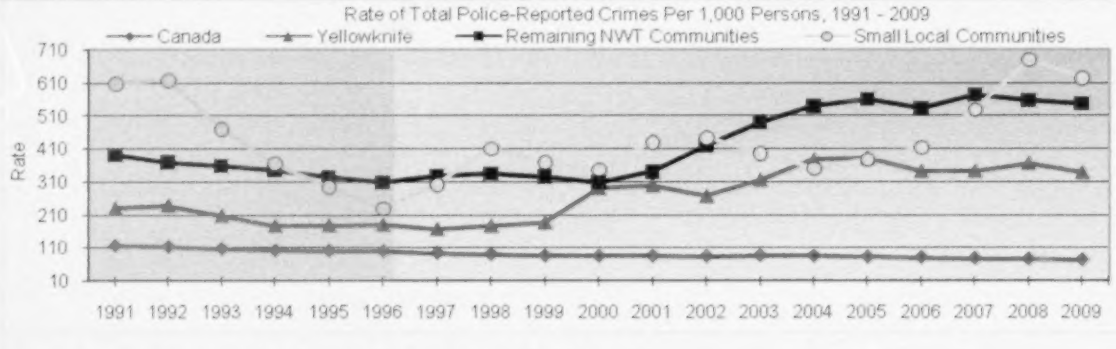
Changes in the way the RCMP collect and classify some types of crimes has affected the rates that are reported for the NWT. There was a change in Yellowknife RCMP reporting between 1999 and 2000. A similar change in RCMP reporting took place between 2000 and 2002 in the rest of the NWT. Some crimes that used to be reported as territorial offences (including *Liquor Act* offences) were now Other *Criminal Code* crimes (such as Mischief or Disturbing the Peace). This change caused an increase in the rates for the different reported crimes under the *Criminal Code*.

Crime rate increases in the NWT are strongly driven by Other *Criminal Code* offences. These include mischief and disturbing the peace. These tend to be linked with alcohol abuse.

Increased crime has an impact on police services and many other parts of the justice system as well. More violent crime could demand different and more resources for policing and corrections. These crimes can also lead to a need for more shelters, social workers and health and community services.

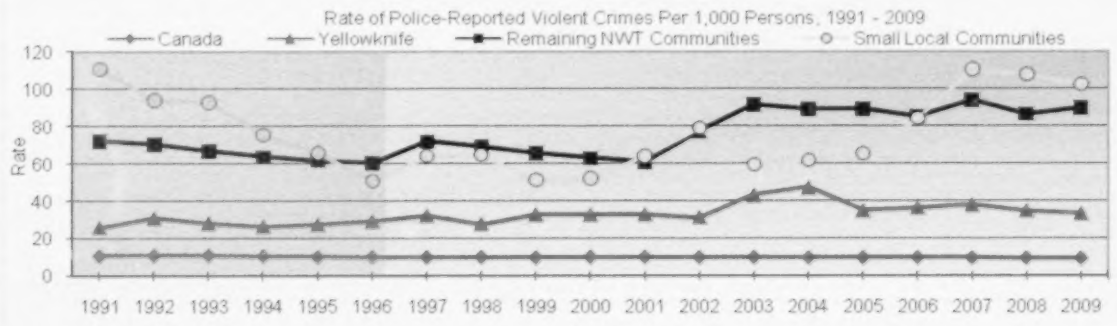
Trend Predicted by Developer (Crime)			
BHP Ekati	↑	De Beers Snap Lake	↑
Diavik	↑		

Total Crimes



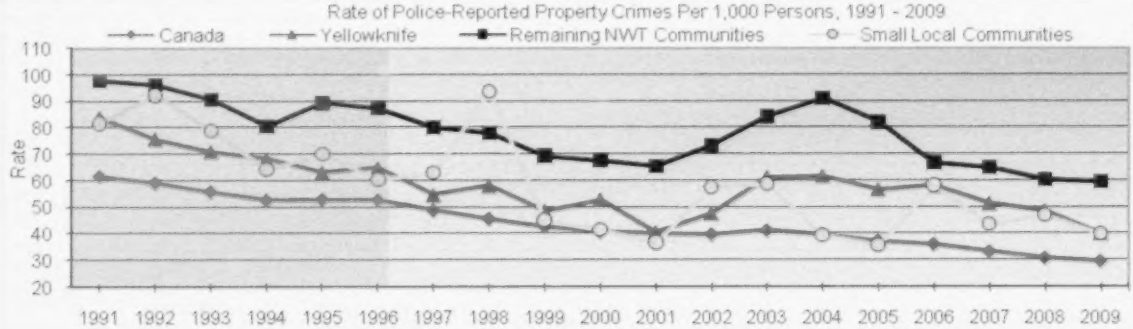
Source: Statistics Canada, Incident-based Uniform Crime Reporting Survey

Violent Crimes



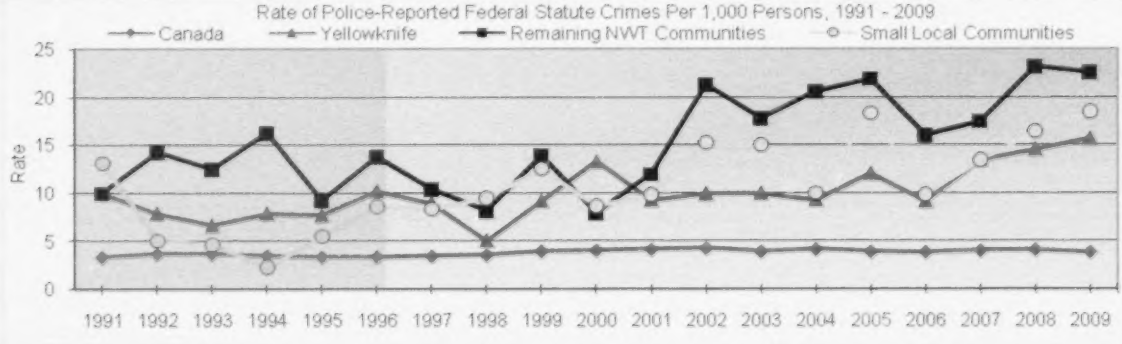
Source: Statistics Canada, Incident-based Uniform Crime Reporting Survey

Property Crimes



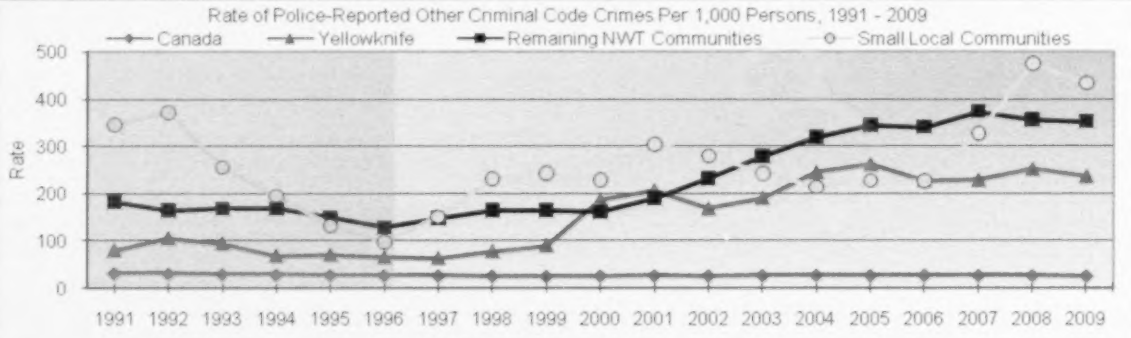
Source: Statistics Canada, Incident-based Uniform Crime Reporting Survey

Federal Statute (Drug) Crimes



Source: Statistics Canada, Incident-based Uniform Crime Reporting Survey

Other *Criminal Code* Crimes



Source: Statistics Canada, Incident-based Uniform Crime Reporting Surveys

What we are seeing

Small Local Communities – When total crime is broken down by type, it seems unlikely that mine activity is influencing the rates of crime. The rate of violent crime is no higher or lower than it was before the mines. Property crime has been going down except in 1998 when the first mine began operation. It was already going down in the before-mine phase. Federal statute (drug) crime has been going up since 1994. Since 2008, this crime rate has been higher in the Small Local Communities than it was at any point in the before-mine phase. But the rate has gone up even more in other small and regional communities. For this reason, mining activity does not seem to be causing the rate for reported drug crimes to go up in the Small Local Communities. Until 2008, the rate for other *Criminal Code* offences in Small Local Communities was no higher or lower in the after-mine phase than it had been in the before-mine phase.

Yellowknife – At this time it seems that mining activity is probably not influencing any one type of crime. Violent crime in Yellowknife is no higher or lower than it was before the mines. Property crime has been going down, following the Canadian trend. Federal statute (drug) crime has been going up in the NWT but decreasing across Canada. It is going up all across the NWT and so may not be influenced by mining activity. The rate for other *Criminal Code* offences has been going up in Yellowknife since 1997. This is different than the trend for Canada, which has been going down. Since 2000 the rate of other *Criminal Code* offences in Yellowknife has been higher than it was at any point in the before-mine phase. However, the same trend has been seen across the NWT. Based on the data we have at this time, there is no reason to conclude that this trend up is linked to mine activity.

Possible reasons for change

The RCMP believes that drug dealers and other organized crime groups have become more active in the NWT. The RCMP confirms that the main drugs used in the NWT are marijuana and cocaine (and crack cocaine). Changes in RCMP activities and resources can also change crime rate data. The increase may be due to more police or more pro-active police efforts.

Housing

There are a few types of housing issues that are most often linked with resource development. These include: the number of people who own a home; the number of people who need to share a house; and how well people are able to maintain their home. Changes in the number of rental units can also affect the housing choices that people have.

A home is crowded when six or more people live in it. Crowding can be a sign of poverty. It can pose health risks and other dangers. Some diseases spread more easily in crowded areas.

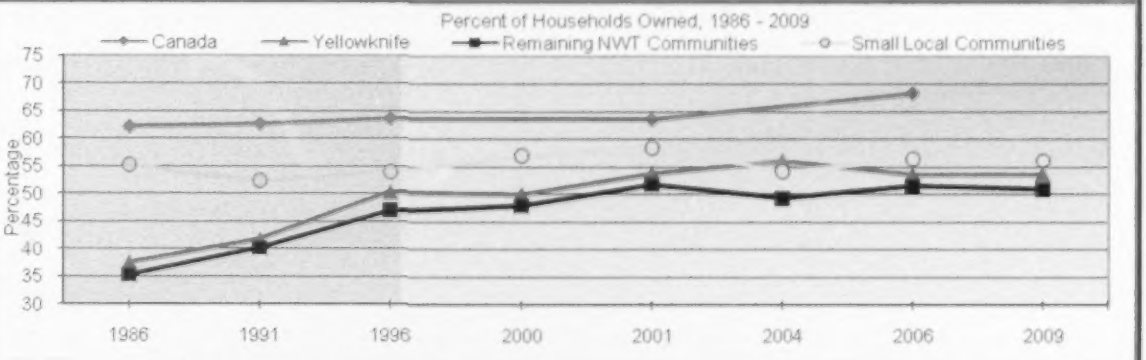
A house is in core need if it is not adequate, suitable or affordable. An inadequate house needs lots of repair. A house is unsuitable if it does not have the number of rooms and facilities that the people in it need. Housing is unaffordable if the people in a household pay more than 30 per cent of their gross income on housing.

Housing is also unaffordable if the income of the people in a household is below the Core Need Income Threshold (CNIT) for the community in which they live. The CNIT is a measure the NWT Housing Corporation uses. It is the income needed to own and operate a home or to rent in the private market without government help.

When people make more money, the number of households in core need goes down. This is because fewer people are below the CNIT for a community. If housing prices go up core need will also go up, which will put more people below the CNIT for that community. The NWT Housing Corporation revised its CNIT for each community prior to the 2009 Housing Needs Survey in an effort to better show the true cost of shelter.

Trend Predicted by Developer			
BHP Ekati	↑	De Beers Snap Lake	↑
Diavik	↑		

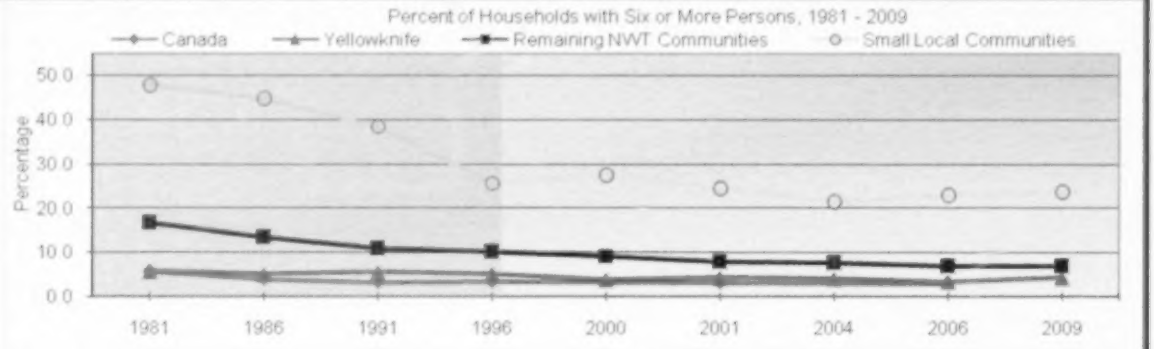
Home Ownership



Source: Housing Needs Survey (2000); NWT Community Survey (2004, 2009); Statistics Canada Census (1986-1996, 2001, 2006)

Crowding

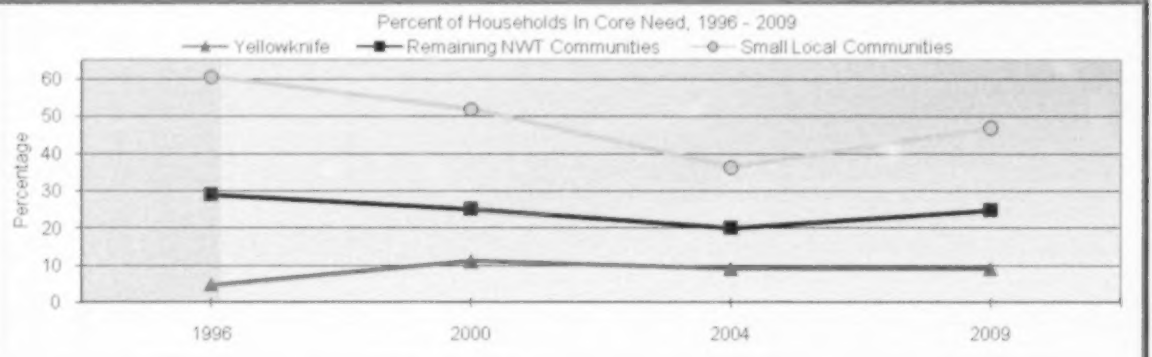
Trend Predicted by Developer			
BHP Ekati	↓	De Beers Snap Lake	↓
Diavik	↓		



Source: Housing Needs Survey (2000); NWT Community Survey (2004, 2009); Statistics Canada Census (1986-1996, 2001, 2006)

Core Need

Trend Predicted by Developer			
BHP Ekati	↓	De Beers Snap Lake	↓
Diavik	↓		



Source: Housing Needs Survey (1996, 2000); NWT Community Survey (2004, 2009).

What we are seeing

Small Local Communities – There has been no change in the per cent of people owning homes since 1996. Crowding has not changed much since 1996. It was going down quickly in the pre-mine phase. The per cent of households in core need has gone down. There has been much improvement since 1996 but core need did go up again in 2009. The change in core need is likely linked to mining.

Yellowknife – Home ownership has gone up in Yellowknife over time. The trend was increasing quickly before 1996 and flattened out after that. The trend in other parts of the NWT is much like the trend in Yellowknife. A larger per cent of people own homes across Canada than in Yellowknife and this increased after 2001. The per cent of people owning homes in Yellowknife decreased after 2004. The flat and decreasing trend for home ownership may be linked to mining activity. Crowding in Yellowknife has gone down over time and matches the trend seen in other parts of Canada. Even though the per cent of

households in core need has gone down across the NWT, it increased in Yellowknife after 1996. The trend has been flat since then. This is likely linked to mining activity.

Possible reasons for change

Family and household structures are changing a lot across the NWT and the rest of Canada. In the last 10 years, the number of households in all regions of Canada has grown faster than the number of people has grown. People have wanted more "living space" in their homes. Houses have been having fewer people in them. Values, what people want, what houses are ready for use and how much money people are making are all factors that help to shape the demand and supply of housing.

Higher incomes from more jobs do not seem to have caused home ownership to go up. In Yellowknife, this may be because inflation has caused house prices to go too high. People who do not plan to stay long in Yellowknife may also choose not to own a home here.

Core need in Small Local Communities is likely down due to people making more money from mine jobs. A recent increase in core need might be linked to the economic downturn affecting all of Canada. The main housing problem in Yellowknife is cost. The increase in core need in Yellowknife may be due to the price of most things going up. Incomes have not changed as much as the cost of repairs has changed.

Cultural Well-Being and Traditional Economy

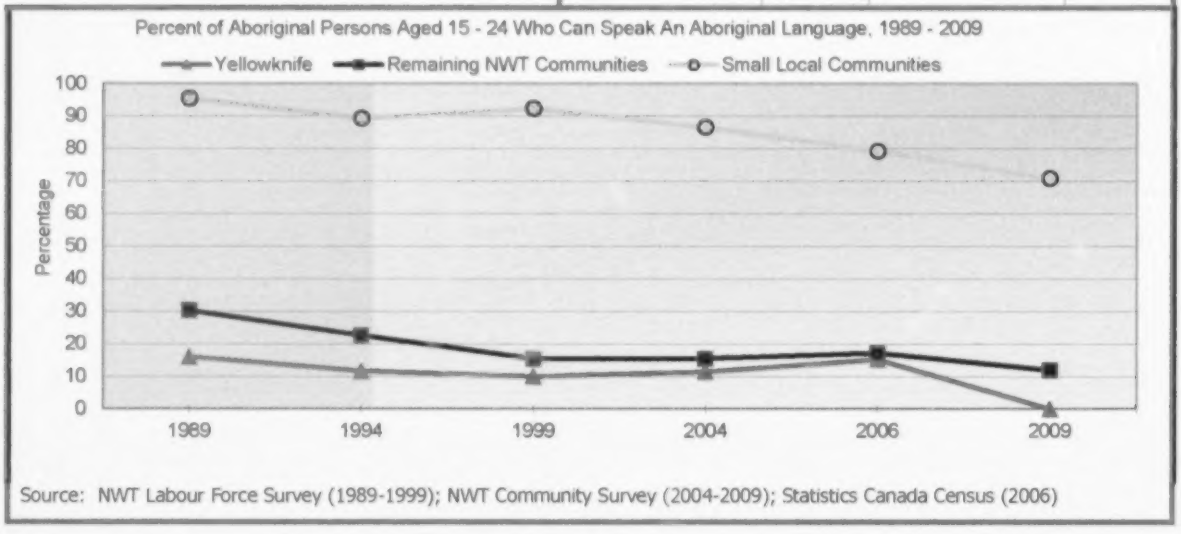
This report looks at two aspects of cultural well-being. It looks at the use of Aboriginal languages and it looks at whether people carry out traditional activities.

Aboriginal mine employees are surrounded by English as they work and live on-site. This may affect the use and health of Aboriginal language in their home communities. This report looks at the per cent of youth aged 15 to 24 who are able to speak an Aboriginal language. Looking at this group will help us see whether language is being passed down. This is also the group whose language skills may be the most at risk from mine employment.

Traditional activities include hunting, fishing, trapping, and the harvesting and eating of country foods. Making crafts using raw materials from the land is also part of this. These activities help people make money and they also help to pass down traditional knowledge and skills to youth.

Language

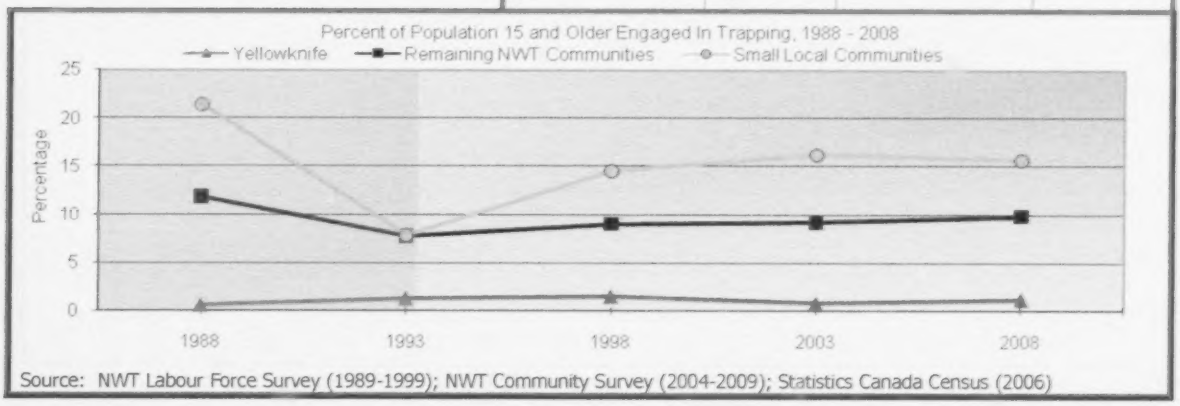
	Trend Predicted by Developer		
BHP Ekati	↓	De Beers Snap Lake	↓
Diavik	↓		



Source: NWT Labour Force Survey (1989-1999); NWT Community Survey (2004-2009); Statistics Canada Census (2006)

Trapping

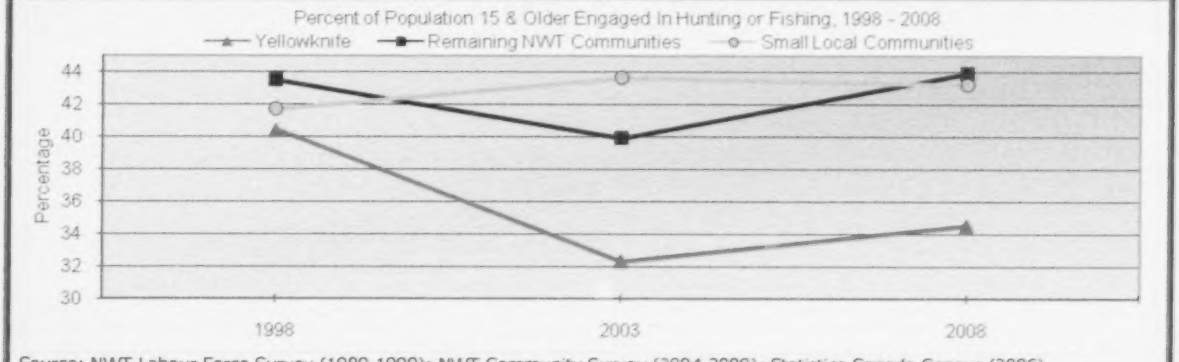
Trend Predicted by Developer			
BHP Ekati	↓	De Beers Snap Lake	---
Diavik	↓		



Source: NWT Labour Force Survey (1989-1999); NWT Community Survey (2004-2009); Statistics Canada Census (2006)

Hunting or Fishing

Trend Predicted by Developer			
BHP Ekati	↓	De Beers Snap Lake	---
Diavik	↑		



Source: NWT Labour Force Survey (1989-1999); NWT Community Survey (2004-2009); Statistics Canada Census (2006)

Eating Country Foods

Trend Predicted by Developer			
BHP Ekati	↓	De Beers Snap Lake	---
Diavik	↑		

Source: NWT Labour Force Survey (1989-1999); NWT Community Survey (2004-2009)

What we are seeing

Small Local Communities – Use of Aboriginal language was going down in the before-mine phase. Language use is still going down although not as quickly as in other small and regional communities. There is nothing to say the mines have influenced language use. The per cent of people trapping has been flat and has not changed since 1998. Mine employment does not seem to be affecting this. More people are hunting or fishing and eating country foods since 1996. This trend is not being seen in other small and regional communities in the NWT. It is possible there is a link between jobs at the mines and having money to get out on the land during time off work.

Yellowknife – Language trends are the same in Yellowknife as they are in other parts of the NWT. The per cent of people trapping seems the same as it was in the before-mine phase. The trends for hunting and fishing and for eating country food are the same in Yellowknife as in the rest of the NWT. None of these trends seem to be influenced by mining.

Possible reasons for change

English is the major language in work places. This may mean Aboriginal languages are spoken less often. Technology also has a role in this. An increase in the use of Aboriginal languages in Yellowknife between 1999 and 2006 may be due to more Aboriginal people moving to the city from other places in the NWT.

If people who have jobs at a mine are better able to buy trapping equipment, then they may trap more. They may also have more time to trap due to the mine-work rotation schedule. The GNWT has also put new programs in place to engage youth and make it easier for people to make a living from trapping.

Wages

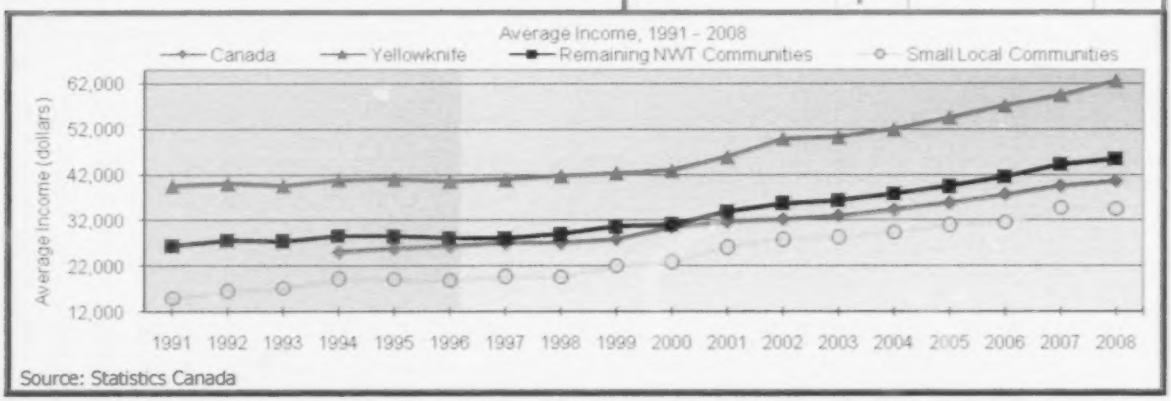
Income data comes from income tax returns. Average income will go up as people are paid more in their jobs. It will also go up if people work longer hours in a day or if they work more weeks in a year. These data do not take inflation into account.

Wage disparity looks at whether mining has led to more people who are poor and more who have a good income. People worried about 'haves and have-nots' when the mines were about to open. Comparing the portion of high and middle income earners to the whole is a way of seeing how income is spread in communities. If these two groups are growing, it means there are fewer low income earners and that wage disparity is shrinking.[xv]

As wages go up, the need for income assistance payments will go down. These data come from records about income assistance payments.

Average Income

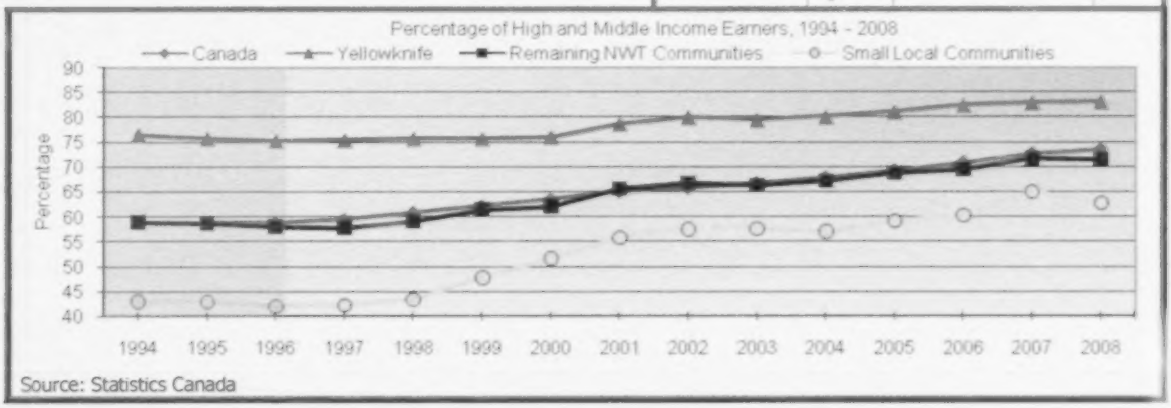
Trend Predicted by Developer			
BHP Ekati	↑	De Beers Snap Lake	↑
Diavik	↑		



Source: Statistics Canada

Wage Disparity

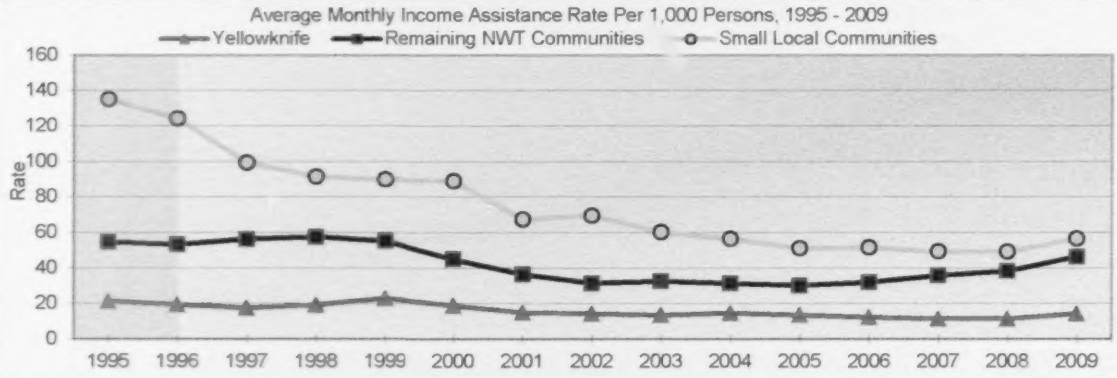
Trend Predicted by Developer			
BHP Ekati	↑	De Beers Snap Lake	↑
Diavik	↑		



Source: Statistics Canada

Income Assistance Payments

Trend Predicted by Developer			
BHP Ekati	↓	De Beers Snap Lake	↓
Diavik	↓		



Source: Department of Education, Culture and Employment, Case Management and Administrative System

What we are seeing

Small Local Communities – Average income has gone up from less than $20,000 per year in 1996 to over $34,000 per year in 2008. This is likely due to jobs at the diamond mines. Inflation and higher education levels also likely have a role in this change. The data show that average income has been rising since 2000 in all parts of the NWT and across Canada. The mines have not added to wage disparity. The portion of low wage earners in Small Local Communities is clearly going down. This is happening faster than anywhere else in the NWT. Since 1996, the need for income assistance payments has gone down more in the Small Local Communities than in other parts of the NWT. This may be due to mine employment, though it was already going down before 1996.

Yellowknife – Since 2000, average income in the NWT seems to be going up more than in other parts of Canada. The wage disparity trend for Yellowknife is flatter than the trend for other parts of the NWT or for Canada. Mining does not seem to have led to more equal wages among people living in Yellowknife. There has been a small drop in income assistance payments since 1996. However, there are no earlier data to compare with this trend. Mining activity has likely not had an effect on income assistance use in Yellowknife.

Possible reasons for change

Income assistance cases have gone up a bit in the NWT over the last couple of years likely due to the economic downturn in 2008. The drop in income assistance cases between 1996 and 1997 was a result of policy changes that made "productive choices" a requirement to receive income assistance. New income assistance models were also introduced in 2007. This means it is hard to compare recent data to earlier data.

Jobs

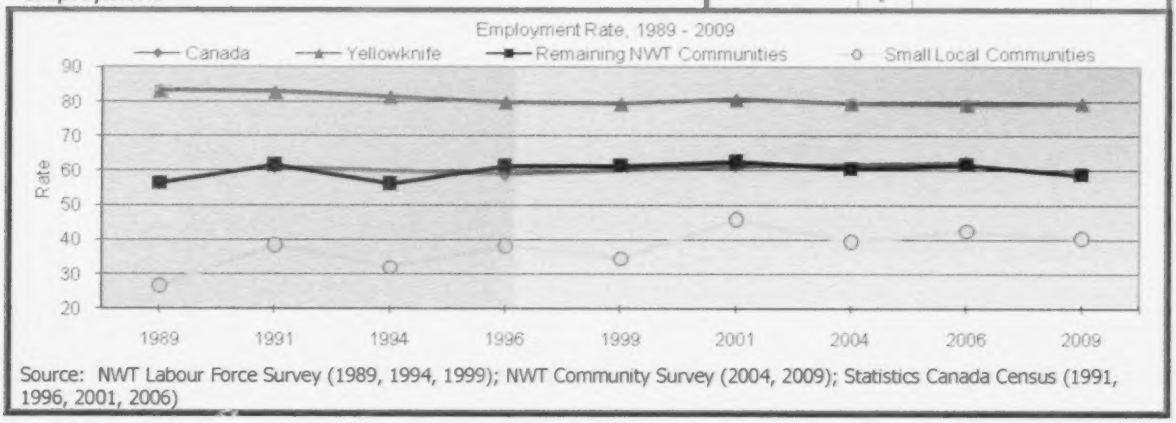
We often look at jobs and employment using three rates. These are the:

1. employment rate – the per cent of people age 15 and older who have jobs;
2. unemployment rate – the per cent of the labour force who are looking for work but not working;
3. participation rate – the per cent of people age 15 and over who are working or looking for work.

With more work at mines, we would expect to see the employment and participation rates go up and the unemployment rate go down. These rates do not tell us if people are working more weeks in a year or if they are working more hours in a year.

Employment

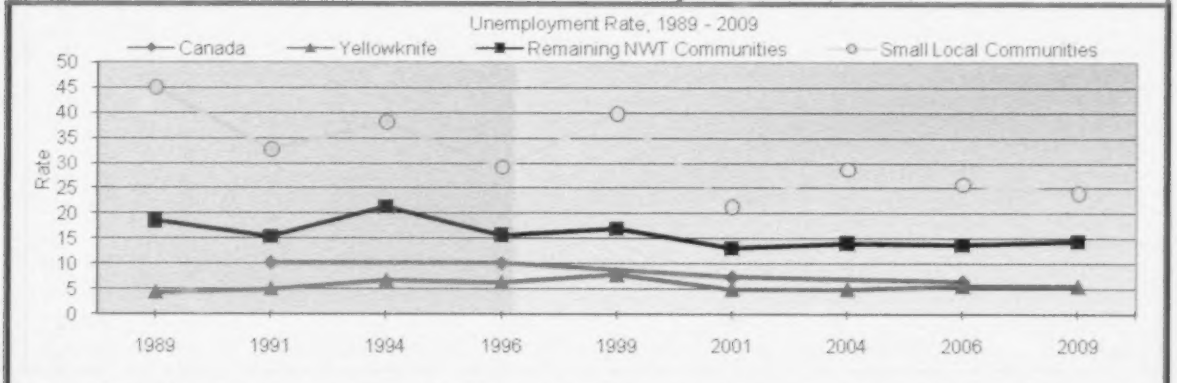
Trend Predicted by Developer		
BHP Ekati	↑	De Beers Snap Lake ↑
Diavik	↑	



Source: NWT Labour Force Survey (1989, 1994, 1999); NWT Community Survey (2004, 2009); Statistics Canada Census (1991, 1996, 2001, 2006)

Unemployment

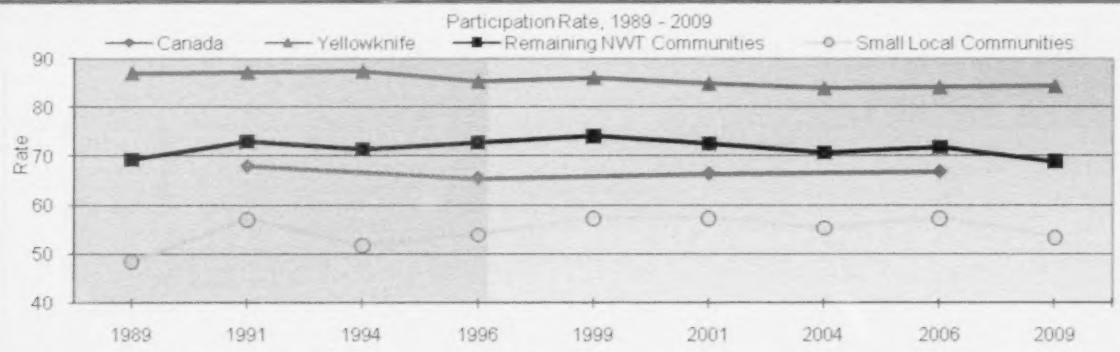
Trend Predicted by Developer		
BHP Ekati	↓	De Beers Snap Lake
Diavik	↓	



Source: NWT Labour Force Survey (1989, 1994, 1999); NWT Community Survey (2004, 2009); Statistics Canada Census (1991, 1996, 2001, 2006)

Trend Predicted by Developer			
BHP Ekati	↑	De Beers Snap Lake	↑
Diavik	↑		

Participation



Source: NWT Labour Force Survey (1989, 1994, 1999); NWT Community Survey (2004, 2009); Statistics Canada Census (1991, 1996, 2001, 2006)

What we are seeing

Small Local Communities – Employment in the Small Local Communities has been on an upward trend since 1989. There was a peak in employment in 2001. Since 2004, the rate has essentially been no higher than rates seen in the before-mine phase. These data do not tell us whether people are working more weeks in a year. Unemployment has also been going down since 1989. In the active-mine phase it has continued to go down more slowly. The mines likely have a role in this trend. The participation rate is no higher and no lower than it was in the before-mine phase.

Yellowknife – Employment was going down in the before-mine phase. The trend has been more flat since then. Except for a peak in 1999, unemployment in Yellowknife has been no higher or lower than it was before 1996. Labour force participation has been going down since 1994.

Possible reasons for change

BHP Billiton, Diavik and De Beers report the person years of employment of Aboriginal people each year. Since 2001 the three mines together have reported at least 600 person years of northern Aboriginal employment each year. In 2008 they reported more than 850 Aboriginal person years.

Employment rates in the Small Local Communities may not have changed because Aboriginal mine workers are moving away from those communities. Unemployment rates can go down when more people find a job. These rates can also go down if more people give up hoping to find a job or if there are more elders or more students in the group of people 15 years and over.

Unemployment in Yellowknife may not go very high because people who are not working tend to move out of the city. The employment rate may also be flat due to fewer mine workers and their families choosing to live in the NWT.

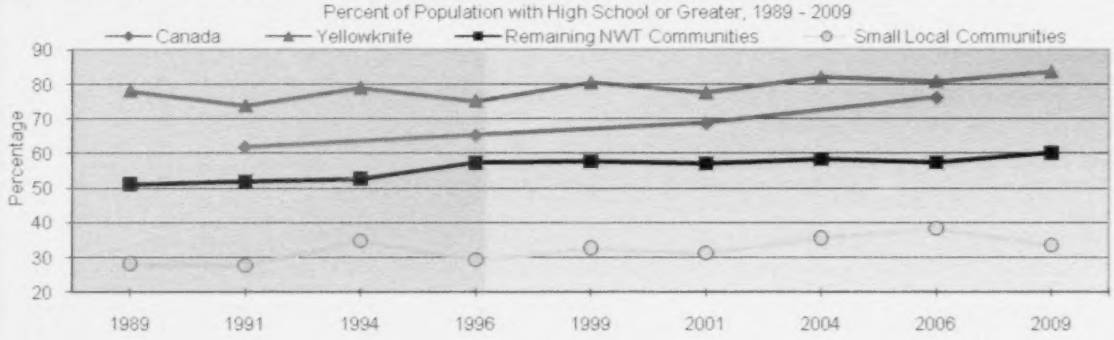
Data about jobs comes from NWT surveys and from the Statistics Canada census. These are collected at different times of the year. This explains some of the change seen from one data point to the next.

Education

"High school completion" means people who have a high school or grade 12 diploma or a General Education Diploma (GED). "Greater than high school" means people who have a trade certificate, college diploma, or university degree. "People with less than Grade 9" counts people aged 15 and older with less than Grade 9. It also includes people who are still in Grade 9.

Trend Predicted by Developer			
BHP Ekati	↑	De Beers Snap Lake	↑
Diavik	↑		

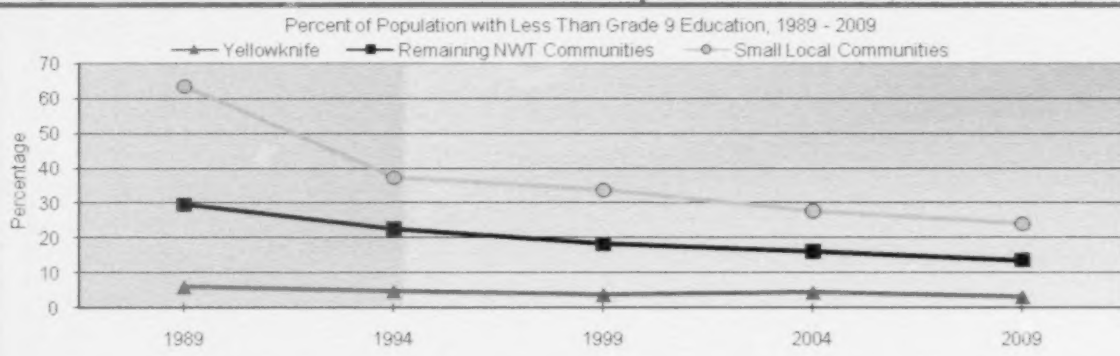
People with High School or Greater



Source: NWT Labour Force Survey (1989, 1994, 1999); NWT Community Survey (2004, 2009); Statistics Canada Census (1991, 1996, 2001, 2006)

Trend Predicted by Developer			
BHP Ekati	↓	De Beers Snap Lake	↓
Diavik	↓		

People with less than Grade 9



Source: NWT Labour Force Survey (1989, 1994, 1999); NWT Community Survey (2004, 2009)

What we are seeing

Small Local Communities – More people have high school and fewer people have less than Grade 9. These have been the trends since 1989. The per cent of people with high school or greater education

peaked in 1994 and 2006. At this time the per cent is only a bit higher than for most of the pre-mine phase. The per cent of people with a less than Grade 9 education dropped sharply in the before-mine phase. It has gone down more slowly since then.

Yellowknife – The per cent of people in Yellowknife with a high school or greater education has been going up slowly since 1991. This per cent has normally been much higher in Yellowknife than in other parts of Canada. That gap has closed over time. Other parts of the NWT showed more improvement than Yellowknife did. The per cent of people with less than Grade 9 has gone down a bit. It was already going down before 1994.

Possible reasons for change

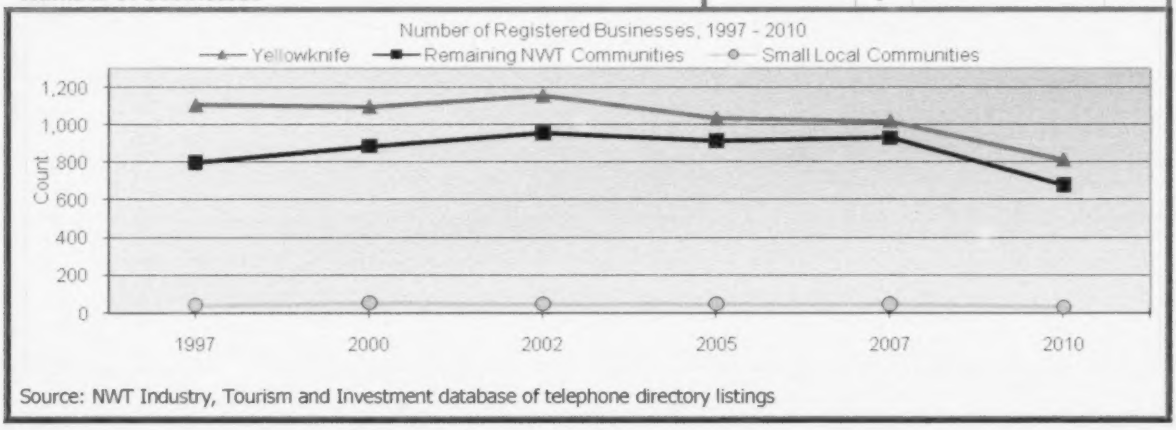
Grade extensions were offered in the smaller communities starting in the late 1990s. This led to a rise in the number of graduates. Support from community groups has also helped people to value the benefits of education. Mines have given incentives for northerners to stay in school by giving educational support, such as scholarships and jobs. Stronger training partnerships between government and industry have helped increase education levels in the NWT.

The drop in per cent of people with a certificate or diploma in the Small Local Communities could be due to educated people moving out of the communities.

Business

Trend Predicted by Developer			
BHP Ekati	↑	De Beers Snap Lake	↑
Diavik	↑		

Number of businesses



Source: NWT Industry, Tourism and Investment database of telephone directory listings

What we are seeing

The number of businesses in the NWT has been going down since 2002. Most businesses are in Yellowknife, Inuvik and the South Slave regions. There is no clear sign that mining caused the number of businesses to go up or down. This is because there are no data from the before-mine phase. There are several new Aboriginal businesses that supply goods and services to the mines. Many Aboriginal businesses have their head offices in Yellowknife, which would explain why the Small Local Community trend has not changed much.

Possible reasons for change

All mines scaled back their production after the recession of 2008, but seem to be coming back to previous levels. This may create new private investments in the next few years.

Net Effect on Government

Trend Predicted by Developer			
BHP Ekati	↑	De Beers Snap Lake	↑
Diavik	↓		

Resource development can bring new money for territorial government programs. Diamond mines pay property and fuel tax. They may pay corporate income tax. They do not pay royalties to the GNWT. Mine workers pay personal income tax and payroll tax.

The amount of revenue the GNWT receives changes if the number of people living in the NWT changes. During the 2010/2011 fiscal year (April 1, 2010 – March 31, 2011), each new person living in the NWT added $27,000 to the Territorial Formula Financing (TFF) grant given to the GNWT by the federal government. This does not take into account the costs of government services for new people.

The 2004 Community Survey tells us that about 245 diamond mine workers living in the NWT came from other places. Some of these people may have moved to the NWT with a spouse and perhaps a child. Overall, the population in the NWT has been more or less flat since 2004.

Even though mining activity raises government revenues, it can at the same time lead to higher costs for government. Many things can lead to higher government costs. These include changes in:

- social trends, such as crime rate or sexually-transmitted infections;
- the number of people living in the NWT;
- inflation.

The GNWT also makes key investments. It makes these so that the NWT can see the most benefit from development with the least impact. These include investment in job training, and in support for small businesses. Another example of GNWT investment was the loan guarantees used to encourage secondary industry in the NWT. These can also include changes to laws, such as the *Protection Against Family Violence Act* created in 2005.

Mineral resource development can also lead to greater demands on government due to the need to:

- maintain and repair wear and tear on infrastructure such as roads;
- build new infrastructure;
- regulate and manage environmental effects.

Unless it has the money to deal with these costs, the net impact of development may be negative for the GNWT.

What we are seeing

Over the nine year phase from 1999/2000 to 2008/2009, GNWT consolidated total expenditures grew at an average annual rate of 6.7 per cent. Much of the increase has been to cover the rising costs of keeping program and services at current levels. People want more from programs and this is causing pressure.

Taxes paid by diamond mines and collected by them on behalf of their employees were about $43 million total in 2009. This estimate does not include indirect employment (people not working for the mine directly) or taxes paid by contractors and their employees. Tax revenues the GNWT receives from the mines, their contractors and their employees is offset under the TFF. For 2008, net revenues to the GNWT from all diamond mine activity were about $26 million.

Sustainable Development

What we are seeing

Access to rough diamonds created an opportunity to promote cutting and polishing in the NWT. Total shipments for the manufacturing sector in 2004 were approximately $63 million, up from $21 million in 1999. Most of this increase was due to secondary diamond processing. In addition to the economic benefits and employment, cutting and polishing promotes northern jewelry design, manufacturing and retailing. In 2006, average annual person years arising from this industry were estimated to be 260.[xvi]

At the start of 2010, the NWT had Crossworks Manufacturing Ltd. (CML) as its only processing plant. This company had eight people working in its NWT factories in 2010. Cutters, polishers and bruters made up most of the workforce. CML is a GNWT Approved Northern Manufacturer.

Part 4. Words to Know (Glossary)

Crimes

Violent crimes – homicide, attempted murder, assault and sexual assault; other assaults; other sexual offences; abduction and robbery.
Property crimes – non-violent theft, breaking and entering, fraud and possession of stolen goods.
Federal statute crimes –drug-related offences under the *Controlled Drugs and Substances Act.*
Other *Criminal Code* offences – mischief, probation or bail violations, prostitution, illegal gambling, arson.

Employment Rate

The per cent of people aged 15 and older who have jobs.

Labour Force

Those people 15 years and older who are working or who are actively looking for work, laid off for a time and thought to return to work, or those who have made some plan to start a new job.

Local Study Area (LSA)

This is a term that is used in environmental assessment. It is used to describe an area that is close to a mine and where we expect to see effects arising from the mine.

Participation Rate

The per cent of people, 15 years of age and over, who are in the labour force.

Potential Years of Life Lost (PYLL)

PYLL is found by taking away the age at which a person dies from an average life span that is 75 years of age. For instance, a person who died at age 65 would have a PYLL of 10 (found by: 75 - 65 = 10). A person who died at age 20 would have a PYLL of 55 (found by: 75 - 20 = 55). The PYLL for an entire group of people is the sum of all the years of life lost by those who died before reaching the age of 75.

Single-parent Families

Single-parent families have a parent at home with no spouse or common-law partner. They also have at least one child who has never been married and who lives in the home.

Socio-economic[xvii]

Socio-economic impacts include social, economic, and fiscal impacts. Social impacts can be put into two groups: demographic and socio-cultural.

- **Demographic impacts**: changes in people such as how many, the number of men and women, how old everyone is, migration rates and the services needed by each group.
- **Socio-cultural impacts**: changes in social structures, the way people organize, relationships, and in culture and value systems such as language or beliefs.
- **Economic impacts**: changes in the number of people with jobs, how much money they make and how much business is going on.
- **Fiscal impacts**: the economic consequences of development for government organizations.

Unemployed[xviii]

Means the number of people who, in the week prior to the survey:

1. Were without work, had actively looked for work in the last four weeks and were ready to work; or
2. Had been laid-off for a time and thought they would soon return to their job; or
3. Had sure plans to start a new job in the next four weeks.

Unemployment Rate

The per cent of the labour force that is without jobs but that is looking for work.